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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/536,789

11/14/2005

Bernhard Kuhn

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EXAMINER

BUMGARNER, MELBA N

ART UNIT

PAPER NUMBER

3732

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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**Office Action Summary**

Application No.

10/536,789

Applicant(s)

KUHN, BERNHARD

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/26/05</u>   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5, 8-21, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Recitation of “the extension” in claims 1 and 8, “the components” in claim 20 lack sufficient antecedent basis. In claims 11 and 12, it is not clear what is claimed by either or both of the handpiece and the transmission arrangement, in that the preamble reads medical or dental handpiece and it comprises the transmission arrangement. In claims 16 and 24, it is not clear which gears are further limited. In claim 18, it is unclear whether this is in addition of the at least two planetary transmission stages.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 4, 11-13, 18, 20, 21, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Meller et al. (5,569,034). Meller et al. disclose a dental handpiece comprising a treatment tool 12 driven by a drive part via a transmission arrangement, the transmission arrangement containing at least two planetary transmission stages (column 2 line 48) connected one after another, each has a sun gear 40 mounted on a drive shaft 20, a planetary gear carrier 60

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having a plurality of uniformly distributed planetary gears 52 cooperating with the sun gear and a hollow gear 50 fixed to a housing 10, surrounding the planetary gears and having an inner toothing 51, the carrier of at least one stage serving as drive shaft and carrier of the sun gear of a following transmission stage, the drive shaft for each stage, extends beyond the sun gear driven, thereby and the carrier associated with this sun gear is arranged rotatably on the extension 101 of the drive shaft. The carriers are slidingly mounted with respect to the drive shafts engaging therein. The sun gears and planetary gears of the transmission stages have identical dimensions (column 2 line 50). The handpiece has a housing 10 and the drive shaft 20 for the first stage is mounted with respect to the housing by a ball bearing 42, and the carrier of the last transmission stage is mounted with respect to the housing by a ball bearing 146. The carriers carry three planetary gears and the arrangement has two stages connected one after the other. The arrangement is arranged in sleeve-like transmission housing 10 and can be emplaced in the handpiece or removed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-8, 10, 19, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meller et al. Meller et al. discloses a handpiece that shows the limitations as described above and the hollow gears of sleeve-like components; however, they do not show the hollow gears of a single component. It would have been obvious to one having ordinary skill in the art

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at the time the invention was made to have the hollow gears of one piece, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). It is noted that the hollow gears are non-rotationally fixed in the housing and lie next to each other, making one piece possible. It would have been obvious to one of ordinary skill in the art as to the specific transmission ratio in that it is known to modify the components, such as size, of the transmission arrangement to obtain different reduction ratios.

7. Claims 14-17, 22-25, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meller et al. in view of Lev et al. (2004/0048711). Meller et al. disclose a handpiece that shows the limitations as described above; however, they do not show components of the transmission stages at least partially comprise ceramic material. Lev et al. teach components such as planetary gears and sun gear comprising ceramic material [0012]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the components of the transmission stages of Meller et al. to partially comprise ceramic material as in Lev et al. in order to provide fatigue-resistant components in view of Lev et al. Lev et al. does not show ceramic material of silicon nitride, it would have been obvious to one of ordinary skill in the art as to the specific type of nitride as Lev et al. disclose broad range of ceramics of carbides, borides and nitrides.

***Allowable Subject Matter***

8. Claims 2 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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9. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. Any inquiry concerning this communication from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner  
Primary Examiner